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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,802	07/22/2003	Martin C. M. M. Barnardo	1181-282	5302

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EXAMINER	
COUNTS, GARY W	

ART UNIT	PAPER NUMBER
1641	

NOTIFICATION DATE	DELIVERY MODE
05/29/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/623,802	BARNARDO ET AL.	
	Examiner	Art Unit	
	GARY W. COUNTS	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-25,34-37,46 and 47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-25,34-37,46 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the claims

The amendment filed 03/04/09 is acknowledged and has been entered.

Currently, claims 22-25, 34-37 and 46-47 are pending and under examination.

Withdrawn Rejections

All rejections of claims not reiterated herein, have been withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 22, 23, 25, 34-37, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hildebrand et al. (US 2003/0166057) in view of Whitehead et al (US 4,554,088) and Koll et al (US 2003/0125657).

Hildebrand et al disclose recombinant class II HLA molecules (e.g., abstract, paragraphs 0120-0122, para. 0200, para.0212). Hildebrand et al disclose that these molecules can be used in methods for the removal of anti-HLA antibodies (para.0120).

Hildebrand et al differ from the instant invention in failing to explicitly teach the sample is a body fluid. Hildebrand et al also fails to teach the step of contacting the sample and removing the bound anti-HLA antibodies.

Koll et al disclose the removal of anti-HLA antibodies from the blood of patients suffering from sensitization of HLA and cytotoxic anti-HLA antibodies (e.g. para 0016).

Whitehead et al disclose methods for depleting a sample of a biological molecule of interest by contacting the sample with an immobilized bioaffinity adsorbent (abstract col 2, col 6-8, 10 and 17). Whitehead et al disclose that the bioaffinity adsorbent can be any biological or other molecule capable of specific or nonspecific binding or interaction with another biological molecule (col 7). Whitehead et al disclose

that the analyte can be immobilized to a magnetic particle. (col 6). Whitehead et al discloses that the particles can be used in vitro or in vivo (col 2). Whitehead et al disclose removing the bound biological molecule from the sample to deplete the sample.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a blood sample as taught by Koll et al into the method of HIldebrand et al because Hildebrand et al is generic with respect to the sample and because Koll et al teaches that it is known in the art to remove anti-HLA antibodies from the blood of patients suffering from sensitization of HLA and cytotoxic anti-HLA antibodies to provide treatment for the patients.

It would have also been obvious to one of ordinary skill in the art at the time the invention was made to immobilize the recombinant HLA molecules as taught by Hildebrand et al on magnetic particles such as taught by Whitehead et al and incorporate contacting and removing steps as taught by Whitehead et al because Hildebrand et al specifically teaches that these molecules can be used in methods of removing anti-HLA antibodies and Whitehead et al specifically teaches steps of removing a biological molecule from a sample and also teaches that the bioaffinity adsorbent can be any biological or other molecule capable of specific or nonspecific binding or interaction with another biological molecule.

5. Claims 22-25, 34-37, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehead et al (US 4,554,088) in view of Viken et al (Human Immunology, Vol 44, 1995, pp. 63-69) and further in view of Lee et al (US 6,150,122).

Whitehead et al disclose methods for depleting a sample of a biological molecule of interest by contacting the sample with an immobilized bioaffinity adsorbent (abstract col 2, col 6-8, 10 and 17). Whitehead et al disclose that the bioaffinity adsorbent can be any biological or other molecule capable of specific or nonspecific binding or interaction with another biological molecule such as antibody/antigen (col 7). Whitehead et al disclose that the analyte can be immobilized to a magnetic particle. (col 6). Whitehead et al discloses that the particles can be used in vitro or in vivo (col 2). Whitehead et al discloses that the depleting of a sample provides for purification of the sample (col 6). Whitehead et al disclose removing the bound biological molecule from the sample to deplete the sample.

Whitehead et al differs from the instant invention in failing to specifically teach the bioaffinity adsorbent is a recombinant MHC Class II or HLA Class II molecule and fails to teach the antibody is an HLA antibody.

Viken et al disclose bioaffinity adsorbents which interact with each other (pgs 63-64). Viken et al disclose that the bioaffinity adsorbents can be recombinant HLA Class II molecules which bind specifically to antibodies of a sample (anti-HLA antibodies).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate recombinant HLA molecules such as taught by Viken

et al as the antigen into the method of Whitehead et al because Whitehead et al is generic with respect to the biological molecule to be depleted and one would use the appropriate bioaffinity reagent, i.e. recombinant HLA molecule to deplete the desired biomolecule of interest, in this case MHC molecule antibodies. Thus, one of ordinary skill in the art would have a reasonable expectation of success incorporating recombinant molecules such as taught by Viken et al into the method of Whitehead et al.

Whitehead et al and Viken et al differ from the instant invention in failing to explicitly teach the sample is a body fluid.

Lee et al discloses that it is known in the art that serum (body fluid) samples from patients comprise Anit-HLA antibodies (e.g., abstract , col 2, 3, col 6). Lee et al disclose immobilized class II antigens for binding to the antibodies of the sample.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a serum sample as taught by Lee et al as the sample in the modified method of Whitehead et al because Whitehead et al and Viken et al are generic with respect to the sample and because Lee et al shows that it is known in the art that serum samples comprise anti-HLA antibodies and one would use the appropriate sample to remove the desired antibodies, in this case anti-HLA antibodies. Therefore, one of ordinary skill in the art would have a reasonable expectation of success incorporating a serum sample such as taught by Lee et al into the modified method of Whitehead et al.

Response to Arguments

6. Applicant's arguments filed 03/04/09 have been fully considered but they are not persuasive.

103(a) rejection Hildebrand in view of Whitehead

Applicant argues that the Examiner provides no reasoning as to why one of skill in the art would have been motivated to make this combination, and is required to do so in a proper *prima facie showing of obviousness*.

This argument is not found persuasive because as stated in the previous office action the primary reference of Hildebrand specifically suggested the removal of anti-HLA antibodies from a sample and Whitehead et al specifically taught how to remove antibodies from a sample. Thus, the references clearly provide obvious suggestions to combine. Further, since Hildebrand specifically suggest the removal of anti-HLA antibodies from a sample, one of ordinary skill in the art would look to the art to see methods for the removal of antibodies from a sample and Whitehead et al teaches conventional methods for the removal of antibodies. Further, while it is true that when obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference, E.g., ACS HOSP. Sys., Inc. v. Montefiore Hosp. 732F .2d1572, 1577, 221 USPQ 929,933 (Fed Cir. 1984), it is also true that this suggestion or motivation need not be expressly stated Cable Elec. Prods., Inc. . Genmark, Inc., 770 F.2d 1015, 1025, 226 USPQ 881, 886 (FED Cir. 1985). The conclusion of obviousness may be made from common knowledge and

common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

103(a) rejection Whitehead in view of Viken

Applicant argues that the Examiner did not provide any explanation relating to a motivation to combine the cited references.

This argument is not found persuasive because as stated above while it is true that when obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference, E.g., ACS HOSP. Sys., Inc. v. Montefiore Hosp. 732F .2d1572, 1577, 221 USPQ 929,933 (Fed Cir. 1984), it is also true that this suggestion or motivation need not be expressly stated Cable Elec. Prods., Inc. . Genmark, Inc., 770 F.2d 1015, 1025, 226 USPQ 881, 886 (FED Cir. 1985). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. Further, as stated in the previous office action one would use the appropriate bioaffinity reagent, i.e. recombinant HLA molecule to deplete the desired biomolecule of interest. Further, one of ordinary skill in the art would recognize from the teachings of Whitehead that the removal of desired biomolecules from a sample provides for the purification of the desired sample.

103(a) rejection Hildebrand in view of Whitehead and Lee

Applicant argues that the Examiner did not provide any explanation relating to a motivation to combine the cited references.

This argument is not found persuasive because as stated above while it is true that when obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference, E.g., ACS HOSP. Sys., Inc. v. Montefiore Hosp. 732F .2d1572, 1577, 221 USPQ 929,933 (Fed Cir. 1984), it is also true that this suggestion or motivation need not be expressly stated Cable Elec. Prods., Inc. . Genmark, Inc., 770 F.2d 1015, 1025, 226 USPQ 881, 886 (FED Cir. 1985). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

Conclusion

7. No claims are allowed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GARY W. COUNTS whose telephone number is (571)272-0817. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571) 272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Gary W. Counts/
Examiner, Art Unit 1641

/GAILENE R. GABEL/
Primary Examiner, Art Unit 1641

5/25/09